



THE SOURCE



NEWSLETTER OF THE NHDES DRINKING WATER SOURCE PROTECTION PROGRAM
ON THE WEB AT WWW.DES.NH.GOV/DWSPP

SPRING 2007

Statewide Study Looks at Risk Factors for MtBE Contamination

In 2005, DES contracted with Weston Solutions to identify and evaluate the factors contributing to methyl tertiary butyl ether (MtBE) contamination in public drinking water supplies. The study has two phases. Phase I included a statewide analysis of public water supply sources, an in-depth study of 49 PWS sources, and an in-depth look at petroleum remediation sites near PWS wells. Since MtBE has been taken out of the state's gasoline supply, Phase II of the project will focus on the persistence of MtBE that has already been released into the ground.

The in-depth studies of 49 sources, some with MtBE detects and some without, provide some interesting insights. Two of the most common risk factors associated with MtBE detections and MCL exceedences were petroleum storage or use in the sanitary protective area and human activity in well-head protection areas that can introduce contamination, e.g., debris piles maintained at nearby residential and industrial sites.

The complete Phase I report, Statewide Methyl Tertiary Butyl Ether Risk Analysis for the State of New Hampshire, is available online at www.des.nh.gov/waste_statewide_methyl.html. The report includes a review of the history of MtBE use in New Hampshire, a summary of previous MtBE studies, and a detailed analysis of the risk factors studied.

Some excerpts from the report:

- “An evaluation of statewide trends in MtBE contamination in PWS wells indicated that an increasing number of wells were contaminated with MtBE each year from 1993 to 2003, after which there was a minor decrease. New cases of MtBE detections ranged from 6 to 56 wells per year. An estimated 83 PWS wells with MtBE contamination were taken out of service between 1993 and 2003.”

- “MtBE was detected in all of the studied surface water PWS which allow motorized boating traffic; however, all MTBE concentrations were below the MCL of 13 ig/L. The

PWS sources that had restrictions on personal watercraft and human contact appeared to have slightly lower concentrations of MtBE when compared to those with virtually no restrictions at all. The surface water supplies evaluated which prohibit motorized boating traffic had no detections of MtBE.”

- “The focused evaluation of remediation sites indicated that although remedial activities at petroleum release sites appeared to be sufficient to protect nearby PWS sources from being impacted by traditional petroleum constituents (primarily benzene, toluene, ethyl benzene, and xylenes); these same activities were not adequate to protect the PWS source from becoming contaminated with MtBE.”

While MtBE is no longer a significant component of gasoline sold in New Hampshire, its persistence in the environment means that water suppliers and municipalities should continue to consider MtBE contamination in planning and regulatory activities. In addition, practices associated with MtBE contamination in the past should still be considered risky in terms of the potential for groundwater contamination with other gasoline constituents. To address these risks, DES recommends that water suppliers and municipalities encourage better land use planning, such as restrictions on gasoline storage or transfer in groundwater resource areas, better site design, and compliance with DES's Best Management Practices rules (Env-Wq 401). Preventing Groundwater Contamination at Gas Stations - What Municipalities and Water Suppliers Can Do is a DES fact sheet that addresses an important potential source of groundwater contamination and is available at www.des.nh.gov/factsheets/ws/ws-22-20.htm or by calling DES Public Information Center at (603) 271-2975.

To help ensure that best management practices are used in commercial and industrial settings, please contact Diana Morgan at (603) 271-2947 or dmorgan@des.state.nh.us or Pierce Rigrod at (603) 271-0688 or prigrod@des.state.nh.us for training and enforcement assistance.



Spotlight on ... Wakefield



The Town of Wakefield is well on its way to protecting the quality of its drinking water supply. Subject to Governor and Council approval, DES recently awarded the town a grant to purchase 208 acres in the wellhead protection area for public wells serving Sanbornville area of Wakefield and Brookfield. DES awards water supply land grants each year to municipalities that wish to acquire land or place conservation easements on land to restrict activities that have the potential of contaminating drinking water.

This project will help protect a mix of forest and farmland very close to municipal wells and will halt gravel excavation and its inherent risks to the wells. Its success will be due to the hard work and dedication of many people. The chair of Wakefield's Conservation Commission, Nancy Spencer Smith, a person of contagious enthusiasm, has been leading the effort. She admits that she could not have done it without the close cooperation of others: Dean Giffen, the Sanbornville Water Department owner and primary operator, who has been very aware of the need to keep drinking water clean and healthy; Edward Albee, the gravel pit owner who wishes to leave a legacy as being part of the solution, not part of the problem; the landowners who are donating conser-

vation easements to meet the 75 percent match required for the DES Water Supply Land Grant Program. Joyce El Kouarti, Executive Director, Moose Mountain Regional Greenways, with her expertise in the land conservation process, has also been an important partner.

As Ms. Smith puts it, "One of the pleasures of working with the conservation easement donors is that they truly understand that the real value of land does not lie in what it can be sold for, but rather in the value that it provides for quality of human and wildlife existence. ... these folks are concerned about being stewards of the land they are fortunate enough to own and are conscious of the intrinsic value these lands afford in protecting water quality, affording wildlife habitat and aesthetic beauty for generations to come."

For more information on DES's Water Supply Land Grant Program, please visit www.des.nh.gov/dwspp/acqui.htm or contact Holly Green at (603) 271-3114 or hgreen@des.state.nh.us.

Another Round of Source Water Grants Approved

The review process for the 2007 Source Water Grant applications has been completed. Eighteen projects were approved for a total of \$255,662. The projects include source security projects, regional source water protection initiatives, wellhead protection area delineation studies, and structural best management practices. If you have a source protection project you would like to complete, please apply for the 2008 round. Applications will be available this summer and will be due November 1, 2007. Information regarding the grant program along with a list of previously funded projects, can be found at www.des.nh.gov/dwspp/grants.htm.

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2006 Law Affects Permits for Large Groundwater Withdrawals

Senate Bill 386, signed into law in June 2006, made several changes to the large groundwater permitting requirements established by SB 374 of 1998 and HB 69 of 2005. These changes include:

- New provision: DES can modify any large withdrawal permit it has issued previously when another large withdrawal permit is developed nearby.
- New provision: municipalities can obtain “intervener status,” requiring DES to meet with municipalities throughout the permitting process.
- Changed appeal process: after being considered by the Water Council, appeals will now go to Superior Court rather than going straight to the Supreme Court.

- The criteria for determining what “adverse impacts” are, and the “potential impact area” in which an applicant must assess the potential for adverse impacts, both previously specified in DES’s rules, have been incorporated into the statute. The significance of this change is that DES no longer has authority to modify these criteria through rulemaking.
- Additional public hearings and sharing of data: In addition to a public hearing being conducted during the preliminary application process, another public hearing must now be conducted upon request after the final report is submitted. DES and the applicant must provide copies of all correspondences pertaining to the groundwater withdrawal application to municipalities in the “potential impact area.”

Groundwater Commission Proposes Three Bills

The Groundwater Commission was established by the legislature in 2003 to make recommendations on how New Hampshire can better manage groundwater resources. In 2005, the work of the Commission resulted in the enactment of laws that improved New Hampshire’s ability to require that persons using water in excess of 20,000 gallons per day accurately report water use to the State. The Commission also recommended the expansion of the State’s groundwater level monitoring network, which the legislature agreed to partially fund. This year, the following three bills developed by the Commission are being considered by the legislature.

HB 457 would give municipalities the authority to restrict residential lawn watering in drought conditions. This bill is in response to water supply emergencies that occurred during the drought in 2001 and 2002. Currently, only customers of community water systems can be subject to water use restrictions during times of low water availability. Otherwise, neither the state nor towns can require residential outdoor watering be restricted during times of drought, unless the governor declares a state of emergency.

HB 458 would exempt replacement or redundant wells from the large groundwater withdrawal permitting requirements. Currently, state law does not address the issue of replacement or redundant wells.

HB 459 would require well drillers to place an identification tag on all water wells and monitoring wells upon installation.

This tag would provide a unique alphanumeric identifier that can be cross referenced to a state maintained database providing information on the well, such as type, yield, and depth. Such information could easily be accessed and used by the State, well drillers, and the public for regional water resource and water quality studies and to better maintain and decommission water wells and monitoring wells.

For more information on these house bills please visit www.gencourt.state.nh.us/ie or contact Brandon Kernen at (603) 271-0660 or bkernen@des.state.nh.us.

WSEB Changes Name

The Water Supply Engineering Bureau’s (WSEB) name has been changed to more accurately reflect its mission and responsibilities. The new name is the Drinking Water and Groundwater Bureau (DWGB). Programs include Public Water Supply Supervision, Groundwater Withdrawal and Permitting, Water Well Board, Environmental Lab Accreditation, Groundwater and Surface Water Protection and Project WET (Water Education for Teachers). For more information on DWGB please visit us at www.des.nh.gov/dwgb or contact us at (603) 271-2513 or dwgbinfo@des.state.nh.us.

Save These Dates!

The annual Source Water Protection workshop will be held on **May 23** at the New Hampshire Technical Institute in Concord. To view the agenda and register online, please visit www.des.nh.gov/dwspp. The event will provide a mix of current research, applied projects and guidance concerning water supply protection. Operator credits will be offered for attending this event and it “sold out” a month in advance last year, so register early!

On **April 9**, Plymouth State University’s Center for the Environment will present a conference entitled, Sustainability of New Hampshire’s Water Resources in a Developing Landscape. Details for this event can be found at www.plymouth.edu/cfe/conferences/nhwc.html.

On **April 28**, the Office of Energy and Planning (OEP) will hold its annual conference at the Radisson in Manchester and DES will be presenting a series of workshops at the day-long event. More information is available at www.nh.gov/oep/index.htm.

Also on **April 28**, the Green Mountain Conservation Group will hold a Drinking Water Protection Conference at the Calumet Conference Center in Freedom on Lake Ossipee. Please visit www.gmcg.org for more information.

Finally, Granite State Rural Water Association (GSRWA) is offering a series of operator training events **now through the end of April**. See GSRWA’s training website for more details www.gsrwa.com/training.htm.

Administrative Rules Update

The Drinking Water and Groundwater Bureau (DWGB) has been busy keeping up with the readoption of state rules, which expire every eight years. As they are adopted, all of the bureau rules are also being redesignated. DWGB rules that were titled Env-Ws will now be redesignated as Env-Dw for drinking water or Env-Wq for water quality.

Recently DWGB readopted the Groundwater Reclassification rule Env-Dw 901 (previously Env-Ws 420) and Best Management Practices for Preventing Groundwater Contamination rule Env-Wq 401 (previously Env-Ws 421).

Env-Dw 901 establishes the criteria and procedures for groundwater reclassification and management of wellhead protection areas and other locally important groundwater. The rules specify application procedures, informational requirements, and the obligations of reclassification required of those local entities requesting reclassification to protect existing or future groundwater sources of drinking water.

Env-Wq 401 establishes best management practices (BMPs) for preventing the release of regulated substances that could contaminate drinking water due to poor material handling, storage, or transfer activities. BMPs include storing regulated substances in securely closed containers, which must have cover overhead and an impervious surface and secondary containment underneath. These rules also require using funnels and drip pans when transferring liquids to and from containers, and keeping spill control and clean up materials nearby.

The adopted rules are now published and are available at www.des.nh.gov/rules/desadmin_list.htm or by calling DES Public Information Center at (603) 271-2975.

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